Section 1-7: Explicit Formulas for Sequences

In-Class Activity: Begin by pairing up with a partner. Open your books to page 41 and work through the activity.

1. a b.

2. a.

n	1	2	3	4	5	6
# of dots in figure	2	6	12	20		

b. c.

3.

4.

5.

Term:

Explicit Formula for the n^{th} Term:

Example 1: Use the formula we derived in the activity to find t_{15}.

Subscript/Index:

Example 2: $t_n = 7n + 1$ for integers $n \geq 1$.

a. Find the first 4 terms.

b. Find t_{12} and state what it means.

Example 3: Matt Mitarnowski is standing on the top of an 80 foot-high wall. Don't ask me why he's up there. He's weird like that. But while he's up there, he decided to drop a ball, which will bounce back 70% of its previous height.

a. Write an explicit formula for this situation.

b. Write the first four terms of this sequence.

c. After how many bounces will the ball bounce less than 9 feet?

Homework:

"Nothing can stop the man with the right mental attitude from achieving his goal; nothing on earth can help the man with the wrong mental attitude." - Thomas Jefferson